BAA09-06 Questions and Answers

Question 1: Will there be a teaming and information site available?

Answer 1: A teaming site is now available and can be accessed at: http://www.davincinetbook.com/teams. The proposer day briefing and attendee list is available at: http://www.darpa.mil/baa.

Question 2: Why develop a subplane?

Answer 2: Detailed in BAA Section 1.1.

Question 3: What support do you have from SOCOM or a Service?

Answer 3: This stage of the effort is completely funded by DARPA.

Question 4: Is there an expectation for 3-day loiter? Air? Surface? Subsurface?

Answer 4: Platform can loiter in any mode of operation.

Question 5: Does the vehicle have to survive more than one mission?

Answer 5: Yes.

Question 6: Does a winning proposal have to have a complete conceptual design or can we propose technologies that ultimately support that design?

Answer 6: Key program elements are described in detail in BAA Section 1.2.2.

Question 7: Will the proposal favor low TRL technologies if the payoff is high?

Answer 7: The proposals evaluation criteria are clearly laid out in the BAA Section 5.

Question 8: Will DARPA fund only portions of the proposal?

Answer 8: See BAA Section 2, "…Additionally, DARPA reserves the right to accept proposals in their entirety of to select only portions of a proposals for award."

Question 9: Is the payload 2,000 lbs or 8 operators at 250 lbs/each? Or, are you looking for 8 operators at 250 lbs each + 2,000 lbs cargo?

Answer 9: The platform should be capable of transporting 8 operators, as well as all of their equipment, with a total cargo weight of 2000 pounds, reference BAA Section 1.2.1.

Question 10: Does the 2,000lbs of cargo include personnel or are personnel in addition?

Answer 10: See answer to question 9.

Question 11: Does cargo have to be brought back to base?

Answer 11: Yes.

Question 12: Do support assets only supply fuel, or can they provide additional resources (such as replace aerodynamic structure components)?

Answer 12: Support assets can supply fuel, lubrication oil, food, and other conventional consumable items not replacement structures.

Question 13: What is the desired submersible depth?

Answer 13: The submersible depth will be dictated by the design concept and the associated CONOPS.

Question 14: Is there a test depth rating for submerged operations?

Answer 14: No, the structural and system requirements of the platform will depend on your technical approach

Question 15: What is the minimum sea state for landing and take off?

Answer 15: The minimum seat state for landing and take off will be dictated by the design concept and associated CONOPS.

Question 16: Can the 2,000 lbs be multiple independent pods, just structurally connected as a unit vehicle?

Answer 16: The cargo area should be made up of one continuous volume.

Question 17: Are there any required sensors (organic) on the platform?

Answer 17: Any system and sensors you require to perform navigation and communication functions.

Question 18: Can the submersible surface to discharge the occupants so they can go ashore? Or, does discharge have to occur underwater?

Answer 18: Whether the submersible surfaces to discharge occupants is dictated by the design concept and the associated CONOPS.

Question 19: Will the vehicle's design need to comply with existing LISN requirements for diving & life-supported deep submergence systems?
~Ditto for aircraft standards?
~If yes, which ones? What parts?
~If "yes," this is a <u>really</u> big obstacle.

Answer 19: Compliance with existing military and civilian regulations will be dependant on the particulars of your design. Safety of the personnel in all phases of the mission remains paramount.

Question 20: Is the 3-day loiter at the end of the 12nm phase of the mission?

Answer 20: Yes. Reference Section 1.2.

Question 21: Does the vehicle have to be subsafe?

Answer 21: The governing safety standards are a function of the parameters for your particular design. Safety of the personnel in all phases of the mission remains paramount.

Question 22: Are rated pilots required?

Answer 22: The operating and manning requirements are a function of your particular design.

Question 23: Are ships 'captains' required for surface and submerged operations?

Answer 23: The operating and manning requirements are a function of your particular design.

Question 24: Can a single company submit more than one proposal?

Answer 24: Yes.

Question 25: Clarify expectations regarding ingress/egress at entry/insertion point.

- submerged?
- surfaced?

Answer 25: Ingress and egress (12 NMi each way) is to be submerged. The insertion/extraction of the crew can be at the surface or submerged. Reference BAA Section 1.2

Question 26: Does Sea State 5 only apply to the loiter phase?

Answer 26: Yes, reference BAA Section 1.2.

Question 27: The platform is required to loiter in theater for up to 3 days, in sea state 5. Are there any sea state requirements during the transit stages?

Answer 27: No, the maximum operating sea state during transit should be a function of your particular design.

Question 28: At the team insertion point, is egress from the craft wet or dry? (i.e. is the craft submerged, beaches, or ashore?)

Answer 28: That is a function of your particular design.

Question 29: During the 3-day wait portion of the mission, is the craft submerged, anchored, maneuvering/evading, or ashore?

Answer 29: That is a function of your particular design.

Question 30: Are staged vehicles (e.g. detachable submersible section) viable concepts?

Answer 30: No, a single platform must be used for all modes of operation.

Question 31: Does 1 person in the 8 person team need to be a "pilot," or is the craft to be highly automated?

Answer 31: Please refer to the answer to question 22.

Question 32: Identify/Clarify environmental control system expectations/constraints:

- **temperatures**
- **pressure**
- **breathing medium**
- **etc.**

Answer 32: That is a function of your particular design. The operating temperature, and pressures, can be above or below ambient conditions provided it can sustain human life.

Question 33: Sea State 5 requirement: How long does SS 5 last?

Answer 33: The loiter stage of the mission is 3 days. Reference BAA Section 1.2

Question 34: Does entire cabin have to be dry for submerged phase?

Answer 34: That is a function of your particular design.

Question 35: Is there a max. altitude for the 100 NMi inbound phase?

Answer 35: That is a function of your particular design.

Question 36: The BAA mentions loitering in SS 5, but what about the landing, takeoff, and submerged operations?

Answer 36: Please refer to the answer to question 15 and 26.

Question 37: How shallow should the water be where operators disembark? Real shallow is difficult for my approach.

Answer 37: That is a function of your particular design.

Question 38: Are there specific customer drivers behind the 1000 NMi Air, 100 NMi surface, 12 NMi subsurface?

Answer 38: This is a canonical mission that DARPA believes will help identify the key technology issues associated with this system concept.

Question 39: Do you expect the proposal to define a baseline concept?

Answer 39: See BAA Section 1.2.2.

Question 40: What aspects of the vehicle can remain above water? (e.g. engines, snorkel…)

Answer 40: That is a function of your particular design.

Question 41: The submerged legs of the mission are short enough in duration to accomplish with a flooded hully fuselage with use of rebreathers. Rebreathers will likely also be used for submerged swim into shore. Is a "wet boat," like an SDV, acceptable?

Answer 41: That is a function of your particular design.

Question 42: You mentioned the possibility of keeping propulsion above the water line. Does DARPA have an exact definition of submersible? What has to be below the water line?

Answer 42: That is a function of your particular design.

Question 43: Regarding ambient condition vs. operational expectations, please amplify:

~Sea State 5 (at or near surface)

~Which SS 5 standard? Seaman or Beaufort?

~Wind Speed?

~Operational Expectations?

- **Landing**
- **Cruise speed**
- **Submergence**
- **Take off**

Answer 43: Please refer to the answer to question 15 and 26.

Question 44: What stage of the mission is the loiter performed at? (i.e. by 12 nm ingress is that 6 n miles in & 6 n miles out to loiter, followed by 6 n mi return to pick up operators & 6 n miles submerged cruise out before surface operation?

Answer 44: Please refer to the answer to question 18.

Question 45: Do the occupants need to be deployed submerged or can the vehicle surface for deployment & return?

Answer 45: Please refer to the answer to question 13 and 25.

Question 46: Will there be a Sea State requirement for takeoff and landing (or 2 different ones)?

Answer 46: Please refer to the answer to question 15 and 26.

Question 47: What is the minimum # of people to be carried?

Answer 47: Please refer to BAA Section 1.2.1.

Question 48: Does the platforms have to be able to take off and land from both the water and a runway?

Answer 48: Yes.